ABSTRACT

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Title of Thesis **Association of body composition parameters established using bioimpedance spectroscopy and predictors of morbidity and mortality in patients with COPD**

Chronic obstructive pulmonary disease (COPD) is one of the leading causes of death and its mortality and morbidity is still increasing. It manifests itself not only as reduced lung function, but there are present also changes in metabolism and body composition in these patients. Mostly it is skeletal muscle protein loss and malnutrition.

The aim of this study was to evaluate the body composition determined using bioimpedance spectroscopy (BIS) and compare them with reference value or the studies dealing with this issue. We examined 7 women and 34 men in various stages of COPD.

The total amount of fat mass was increased in 56 % of patients compared with reference values. The loss of skeletal muscle protein occurs only in 27 % of patients. The average body mass index was 28.2 ± 6.0 kg / cm2, which indicates overweight. Impedance values were significantly higher in women than in men in the range from 50 to 200 kHz and from 421 to 1000 kHz. We did not prove decrease in the average values of the phase angle measured at a frequency of 50 kHz (5.5 ° ± 0.8 ° for males and 5.1 ° ± 0.7 ° for females). We also found a lot of associations between the parameters established through BIS and predictors of mortality in patients with COPD, the closest correlation was found with ADO index.

We have not confirmed poor prognosis in our patiens with COPD. However, we have seen some changes compared with the reference values for individual evaluation of each patient.